CLAIMS (30834)

What is claimed is:

1. A method of wireless communication, comprising the steps of:

(a) transmitting a first packet on a transmission channel to a transceiver;

(b) receiving a second packet on a transmission channel from said transceiver, said second packet including information regarding the transmission channel to said transceiver;

(c) measuring the transmission channel from said transceiver;

(d) calculating calibration factors for said transmission channel to said transceiver using the information from step (b) and the measurement from step (c); and

(e) for transmitting a third packet on said transmission channel to said transceiver, estimating said transmission channel to said transceiver from said calibration factors and a second measurement of said transmission channel from said transceiver.

2. The method of claim 1, wherein:

(a) said calibration factors include a gain factor and a phase shift factor.

3. The method of claim 2, wherein:

(a) said gain factor is the ratio of an overall gain for transmission to said transceiver divided by an overall gain for transmission from said transceiver.

4. The method of claim 2, wherein:

(a) said phase shift factor is the difference of an overall phase shift for transmission to said transceiver minus an overall phase shift for transmission from said transceiver.

5. The method of claim 1, wherein:

(a) said transmitting is in a time division duplex mode.

6. The method of claim 1, wherein:

(a) said first packet includes a request for said transceiver to respond with information regarding the transmission channel to said transceiver.

7. The method of claim 1, further comprising:

(a) updates of said information from said transceiver.

8. A wireless communication system, comprising:

(a) a master transceiver for a communication channel; and

(b) a slave transceiver for said communication channel;

(c) wherein said master transmits to said slave using estimates for said communication channel calculated from measurements of said communication channel for transmission received from said slave together with calibration factors from prior measurements of said communication channel by said slave and said master.

9. A wireless communication transceiver, comprising:

(a) a transmitter;

(b) a receiver coupled to said transmitter;

(b) said transmitter including a channel estimator and a wave shaper for transmitting to a transceiver, wherein said channel estimator estimates the channel to said transceiver from measurements of the channel from said transceiver together with calibration factors from channel information received from said transceiver.